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Before the
FEDERAL COMMUNICATIONS COMMISSION
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)	Gen. Docket No. 90-314
)	ET Docket No. <u>92-100</u>
Amendment of the)	
Commission's Rules to)	RM-7140, RM-7175, RM-7617,
Establish New Personal)	RM-7618, RM-7760, RM-7782,
Communications Services)	RM-7860, RM-7977, RM-7978,
)	RM-7979, RM-7980
)	PP-35 through PP-40
)	PP-79 through PP-85

To: The Commission

COMMENTS OF VIACOM INTERNATIONAL INC.

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SUMMARY

Viacom International Inc. ("Viacom") applauds the FCC's Notice of Proposed Rulemaking and Tentative Decision as a significant step toward rapid deployment of a nationwide PCS service. As a cable operator holding several experimental PCS licenses, Viacom recognizes the substantial difficulties the FCC faces in balancing the needs of potential PCS licensees with those of incumbent fixed microwave users.

In conjunction with its consultant Impulse Telecommunications Corporation ("Impulse"), Viacom has developed a spectrum sharing methodology which permits PCS operators to use whatever spectrum is available in the 1850-1990 MHz band to avoid interference to and from incumbent fixed microwave users. This methodology, called Spectral Zone Coordination, yields a variety of alternatives for relieving frequency congestion, from which the most efficient solution may be selected. By contrast, under the FCC's proposed "fixed block" approach, the PCS licensee's only option is to deal directly with the incumbent user. As a result, the FCC's proposal will increase the number of spectrum sharing problems which can only be resolved via the costly and time-consuming process of negotiation or involuntary relocation. To ensure the fastest possible deployment of PCS at the lowest possible cost, Viacom recommends that the FCC apply the Spectral Zone Coordination methodology to its proposed fixed block approach, i.e., assign fixed blocks to each PCS licensee but establish a reserve "pool" of frequencies in the 1850-1990

MHz band which can be used by the licensee during negotiations with incumbent users.

Viacom also submits that two PCS licensees per market would be optimal, and that in no event should the number of PCS licensees per market be more than three. If the FCC adopts the Spectral Zone Coordination approach as recommended herein, Viacom suggests that an extended voluntary negotiation period would be appropriate, but that in the absence of Spectral Zone Coordination the voluntary negotiation period should be no longer than three years. As to unlicensed PCS operations, Viacom submits that the problems with identifying unlicensed sources of interference require careful re-examination of whether a frequency "set-aside" for unlicensed PCS is desirable.

Viacom further recommends that the FCC maximize the potential number of competitors in PCS by refusing to issue nationwide PCS licenses; adopting the cellular service areas as the service areas for PCS; prohibiting cellular and local exchange carriers from participating in PCS in their own service areas; and "capping" the number of PCS licenses which may be held by a single entity. Finally, Viacom also supports the imposition of a high filing fee and the imposition of some type of financial certification requirement to discourage speculators.

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To: The Commission

COMMENTS OF VIACOM INTERNATIONAL INC.

Viacom International Inc. ("Viacom") herein comments on the FCC's Notice of Proposed Rulemaking and Tentative Decision ("NPRM")^{1/} in the above-captioned proceeding. Viacom operates cable television systems serving subscribers in and around, inter alia, San Francisco, California; Nashville, Tennessee; Seattle-Tacoma, Washington; Dayton, Ohio; and Milwaukee, Wisconsin. In addition, Viacom holds an experimental license to test Personal Communications Services ("PCS") in each of these five areas.^{2/}

I. INTRODUCTION

Viacom applauds the FCC's NPRM as a significant step toward rapid deployment of a nationwide PCS service. In particular, Viacom commends the FCC for its efforts to ensure the long-term

^{1/} FCC 92-333 (released August 14, 1992).

^{2/} The call signs for Viacom's experimental PCS licenses are KG2XJK (San Francisco); KG2XCG (Nashville); KG2XJA (Seattle-Tacoma); KG2XSD (Dayton); and KG2XJD (Milwaukee). On May 4, 1992, Viacom filed a request for a Pioneer's Preference in the licensing process for PCS (PP-78).

viability of PCS without compromising the interests of incumbent fixed microwave users.

As the FCC has already recognized, the issue of what spectrum should be allocated to PCS is a difficult one, given that most usable spectrum is already occupied. To address this problem, the FCC has proposed a spectrum-sharing scheme based on the assignment of fixed frequency block pairs to PCS licensees. As set forth in the attached Technical Showing (see Exhibit 1) prepared by Viacom's consultant, Impulse Telecommunications Corporation ("Impulse"), Viacom proposes a more flexible spectrum-sharing scheme which allows for sharing of spectrum across the entire 1850-1990 MHz band. For the reasons stated below, Viacom believes that the FCC's proposal will delay the introduction of PCS services due to less efficient and more costly relocation of incumbent microwave users, and that an approach modeled on the Viacom proposal would better serve the public interest. Viacom also comments on the FCC's proposals with respect to the number of PCS licensees per market; the period for voluntary relocation of incumbents; the frequency "set-aside" for unlicensed PCS operations; the service areas for PCS; the PCS eligibility requirements; and the PCS licensing mechanism.

II. COMMENTS ON SPECIFIC FCC PROPOSALS

Spectrum Allocations

The FCC has tentatively concluded that a spectrum allocation supporting a minimum of three PCS providers per market will be

necessary to ensure provision of the widest range of services at reasonable prices. NPRM at ¶ 34. Specifically, the FCC proposes to award 30 MHz of spectrum to each of the three PCS licensees in a market. Id. at ¶ 37. This allocation allows each PCS licensee an amount of spectrum comparable to that allocated for a cellular licensee (25 MHz) plus an additional amount to accommodate sharing of spectrum. The 90 MHz of PCS spectrum allocated to each market (i.e., 30 MHz x 3 licensees) would be divided into three fixed 15 MHz frequency block pairs, with 80 MHz of separation between the transmit and receive frequencies in each block pair. Id. at ¶ 38.^{3/}

In conjunction with Impulse, Viacom has developed a methodology by which Personal Communications Networks ("PCNs") can share the 1850-1990 MHz band in all MSAs on a nationwide basis. As discussed in more detail below, this methodology, called Spectral Zone Coordination, assumes that providers of PCNs will have the flexibility to use whatever spectrum is available in the 1850-1990 MHz band to avoid interference to and from incumbent fixed microwave users.^{4/}

^{3/} Viacom objects to the 80 MHz separation requirement if the FCC intends to require PCS operators to use their paired blocks as "uplink and downlink" frequencies (i.e., to and from the base station). This approach would be unnecessarily restrictive and would preclude other approaches and technologies that might produce higher spectrum efficiencies or facilitate spectrum sharing (e.g., Time Division Duplex). Exhibit 1 at 3.

^{4/} Viacom initially presented the Spectral Zone Coordination methodology to the FCC as the basis for its request for a Pioneer's Preference (see note 2, supra).

Proposed FCC rules require new users of the 1850-1990 MHz band to strictly adhere to established limits on harmful interference to existing users. In effect, there are areas where any radio signals within the frequency range of existing users must be below certain defined limits. If there is sufficient frequency spectrum remaining to accommodate a new user after consideration of these constraints, then sharing of spectrum is feasible for the new user. Under Spectral Zone Coordination, a "spectral zone," defined as a specific geographical area surrounding a fixed microwave site in which use of certain frequencies is prohibited, is established for each microwave receiver in the band. To avoid interference, a PCN operator will ensure that radio signals within that spectral zone are outside the frequency range of the spectral zone.^{5/} Spectral Zone Coordination assigns bands to each PCS operator, but allows substitution of other spectrum on a cell-by-cell basis to allow flexibility for accommodating incumbent fixed microwave users.

Viacom's analysis assumes two competing PCN systems sharing frequencies equivalent to 50 MHz, or 25 MHz per licensee, in the 1850-1990 MHz band.^{6/} In utilizing these assumptions and

^{5/} The FCC proposes to use the levels of protection set forth in Part 94 and in the EIA/TIA publication TSB10-E as the basis for calculating harmful interference from PCS to incumbent fixed microwave users. NPRM at ¶ 110.

^{6/} Viacom selected a 25 MHz allocation per licensee because that is the amount of frequency proven viable for cellular, and because it is expected that cellular and PCN will compete for some of the same business.

applying Spectral Zone Coordination to the San Francisco MSA, Viacom found that most of the subject area has one or more sets of frequencies which are unavailable to PCN due to the need to protect the existing fixed microwave paths.^{7/} This means that no contiguous block or blocks of 25 MHz would be available to a single licensee at all cell sites. Hence, assuming the deployment of cells with a typical seven cell frequency re-use pattern, two PCN operators in the San Francisco MSA would need access at any given cell site to any available 7 MHz of spectrum, or 3.5 MHz per operator, in the 1850-1990 MHz band to avoid interference to incumbent microwave users.^{8/} Under this approach, the spectrum available for PCN may comprise one specific 7 MHz frequency group in one part of the MSA, and entirely different 7 MHz frequency groups in other parts of the MSA, but in order to minimize the number of existing private microwave stations that must be relocated, the 7 MHz assigned to each prescribed area need not be contiguous. The objective of the "equivalent" 50 MHz allocation for the entire service area is to allow the use of any of these frequency groups when needed, while preventing the two PCN operators from using more than 50 MHz in total.

^{7/} The methodology and results of Viacom's application of Spectral Zone Coordination to the San Francisco MSA are set forth in greater detail in Viacom's request for a Pioneer's Preference.

^{8/} Since the cell sites of two PCN providers will not necessarily be co-located, the specific frequencies can be assigned to narrowly prescribed areas as defined through Spectral Zone Coordination, rather than to specific cell sites.

Through the use of spectral zone maps and cell maps, Impulse identified all the microwave paths in the San Francisco MSA which would contribute significantly to causing unacceptable interference between potential PCN providers and existing microwave users. After removing those paths from the analysis, Impulse recomputed the spectral zone and cell maps, identifying areas where frequency congestion had been eliminated by path removal. Impulse determined that all frequency congestion in the San Francisco MSA could be removed by relocation of only two selected paths to the 6 GHz band, at an estimated typical cost of \$140,000 per path. After adding an additional \$20,000 for installation of high performance antennas, Impulse estimated that the total cost of resolving all frequency congestion problems in the San Francisco MSA would be approximately \$300,000, far less than originally anticipated.^{9/} The actual relocation cost to an individual PCS licensee would be further reduced by the fact that the cost will be spread among all PCS licensees in the market.

It must be noted that this relatively simple solution to the problem was available because PCN providers were assumed to have

^{9/} Impulse had initially estimated that as many as 30% of the paths in the 14 MSAs that Spectral Zone Coordination revealed had congestion would have to be relocated. See Exhibit 1. Impulse therefore initially estimated that it would cost \$2.3 million dollars to remove all sharing-related constraints from the San Francisco MSA. More detailed engineering analysis of the San Francisco MSA revealed that the estimated relocation costs could be reduced to \$300,000, which is approximately 87% lower than Impulse's original estimate.

access to an equivalent 50 MHz of spectrum in the 1850-1990 MHz band as opposed to fixed frequency blocks. Because it allows each PCN operator to use any available 3.5 MHz frequency group when needed, Spectral Zone Coordination yields a variety of alternatives for relieving frequency congestion, from which the most efficient solution may be selected.^{10/} By contrast, the FCC's proposal to assign fixed frequency block pairs will allow a PCS licensee no such flexibility, since the PCS licensee's only option under a fixed block system is to deal directly with the incumbent user. This necessarily increases the number of spectrum sharing problems which can only be resolved via the costly and time-consuming process of negotiation or involuntary relocation.

Viacom therefore does not support the FCC's proposal to divide its proposed 90 MHz of allocated spectrum into three fixed 15 MHz frequency block pairs, i.e., Channel Block A:1850-1865/1930-1945 MHz; Channel Block B:1865-1880/1945-1960 MHz; and Channel Block C:1880-1895/1960-1975 MHz. NPRM at ¶ 38. As described more fully in the attached Technical Showing, the use of fixed spectrum blocks without additional spectrum sharing from a reserve pool is unworkable for at least three reasons. First, within any given market certain frequency blocks may be more vulnerable than other frequency blocks to harmful interference

^{10/} In addition to relocation of existing users to other frequency bands, other solutions available under Spectral Zone Coordination include PCN re-design and/or technical modifications to fixed microwave transmitters or receivers.

from incumbent users of the spectrum. Exhibit 1 at 4, Figure 1-1. For example, if a 10 MHz path at 1875 MHz or 1865 MHz exists in operator B's service area, there will be a geographic zone where B cannot provide service because frequencies are unavailable for PCS use. To the extent that the A and C operators do not have this problem, the B operator will bear higher costs of relocating incumbent users, and will therefore be at a competitive disadvantage in the market.^{11/}

Impulse has conducted a nationwide Fixed-Band Impact Study which effectively demonstrates the problem. Applying the FCC's proposal to all MSAs nationwide, Impulse found that 94% of the MSAs that will have PCS/incumbent user frequency conflicts will have an unequal distribution of conflicts between operators A, B and C. Exhibit 1 at 6. Impulse also found that in 92 MSAs only one or two of the three PCS operators will have frequency conflicts, while the remaining operator(s) will have none. Id.

The second problem with the use of fixed frequency block pairs as proposed by the FCC is that they are likely to result in numerous instances where a single microwave system user can block deployment of a PCS system and in effect enjoy a monopoly over the frequencies in question. For instance, in the above example

^{11/} Figure 1-1 also indicates that the FCC's particular "split band" approach may be counterproductive because the inflexibility inherent to the use of two relatively small bands may offset any gains achieved in clearing incumbent users off the transmit and receive channels. Exhibit 1 at 5. Splitting the band in this fashion may preclude the use of radio technologies which require contiguous spectrum of more than 15 MHz. Id.

the licensee of a 10 MHz path at 1875 MHz or 1865 MHz could essentially "sit" on its frequencies until it could extract an exorbitant price from operator B, who under a voluntary relocation scheme would have no alternative but to pay it. By contrast, Spectral Zone Coordination is a flexible system that allows for spectrum sharing across the entire 1850-1990 MHz band, producing various alternatives for relieving spectrum congestion and thereby preventing a single incumbent user from holding frequencies hostage and unreasonably delaying the initiation of PCS service.

Impulse's Fixed-Band Impact Study attached to Exhibit 1 highlights this problem as well. Assuming that the FCC allows PCS licensees to use either the upper 15 MHz of their assigned frequency band or the lower 15 MHz of that band to work around existing microwave paths (meaning that PCS service will be blocked only if both the upper band and the lower band are blocked), the FCC's proposal will require relocation of 1520 paths in 155 MSAs nationwide. Exhibit 1 at 5. By contrast, Spectral Zone Coordination will require relocation of less than 171 paths in 14 MSAs nationwide. Assuming an average cost of \$140,000 per relocated path, the total cost of relocation under the FCC's proposal would be approximately \$212 million, where as the total cost of relocation under Spectral Zone Coordination

would be \$25 million. Id.^{12/} While the results would not be exactly the same if the underlying assumptions are changed (e.g., 3 PCS licensees with 30 MHz each, rather than 2 with 25 MHz each), the Spectral Zone Coordination technique, when applied to whichever number of licensees and types of frequency assignments the FCC employs, will result in many fewer relocations, much lower costs of relocation than would fixed frequency block assignments, and earlier deployment of PCS services.

Moreover, as the number of required relocations becomes larger, factors other than cost come into play. For instance, increasing the required number of relocations very likely will also increase the number of existing microwave licensees that either will not cooperate or will insist on excessive compensation for relocation. Absent the increased flexibility Spectral Zone Coordination would produce, the potentially prolonged and widespread gridlock between PCS operators and existing microwave licensees may eventually transform the whole relocation question into a highly charged political issue, an undesirable result given the need for immediate deployment of PCS.

Finally, the third problem with the FCC's proposal is that it does not guarantee that PCS will be spectrally equivalent to

^{12/} Extrapolating the more detailed San Francisco analysis discussed in footnote 9, supra, to the remaining MSAs where some relocation would be required, the true total cost of relocation under Spectral Zone Coordination as originally proposed by Viacom would in all likelihood be substantially less than \$25 million.

cellular. In areas where there will be no frequency congestion, PCS, with 30 MHz per operator, will have a spectrum advantage over cellular, since cellular operators operate with 25 MHz. Exhibit 1 at 7. Even in areas where there may be some congestion, PCS will have an overall spectrum advantage over most of its service area. Id. In areas of high frequency congestion, however, PCS may suffer a spectrum disadvantage versus cellular. This is because the inflexibility of the FCC's fixed block scheme will virtually negate any advantage gained from the extra 5 MHz of spectrum, and in a large number of areas will result in PCS actually having less spectrum to work with than cellular. Id. Of course, the PCS operator may solve the problem through negotiations with the incumbent fixed microwave user, but this will impose delays and costs on the PCS operator which are not borne by cellular. Id.

Viacom submits that Spectral Zone Coordination can be applied to the FCC's proposal in a manner which retains most of the advantages of a fixed block allocation (e.g., consistency with the existing fixed microwave channelization plan, accommodation of single frequency technologies) while adding the flexibility of the pure Spectral Zone Coordination methodology. Such an approach would contain the following elements:

- Each PCS licensee would be awarded a fixed 25 MHz block of spectrum, designated as its assigned spectrum.
- During a transition period, a 70 MHz frequency block (assuming the FCC allocates two 25 MHz frequency blocks for PCS and reserves 20 MHz for unlicensed PCS operations) would be designated as a spectrum "pool" to

be used by PCS licensees to avoid interference to incumbent users.

- Each PCS licensee would be required to notify the FCC of its use of any frequencies in the spectrum "pool" on a cell-by-cell basis. The notification would be placed on Public Notice by the FCC. If no objections to the notification are filed within thirty days of publication, the notification would become a conditional authorization effective until the incumbent user relocates off the PCS operator's original frequency.
- Upon relocation of the incumbent, the PCS operator would be responsible for cancelling the conditional authorization and operating within its assigned band as promptly as possible.

See Exhibit 1 at 9-10. The combined effects of microwave path attrition, new technology, and other influences such as involuntary relocation of incumbent users will eventually "re-regularize" the 1850-1990 MHz band to the point where the FCC will once again be able to reserve spectrum in that band for additional services. *Id.* at 10. Furthermore, the above-described approach will have no adverse effect whatsoever on the quality of service to PCS subscribers.

It should be noted that the approach Viacom recommends will produce better results than the FCC's proposed fixed block allocations even if the FCC assigns 30 MHz of spectrum to each of three licensees in a market. For three licensees granted 30 MHz each, the spectrum "pool" will be 30 MHz rather than 70 MHz. Exhibit 1 at 10. To the extent that the size of the "pool" is reduced, the effectiveness of the Spectral Zone Coordination technique is also reduced. Nonetheless, the cost of relocation

will remain far less than what would be incurred under a "pure" fixed block approach.

Number of Licensees

As noted above, the Impulse study assumed an allocation of 50 MHz to PCS, with two licensees per market utilizing 25 MHz each. Viacom believes that two licensees per market will ensure the long-term viability of PCS, since it minimizes sharing conflicts while providing sufficient spectrum for PCS to be competitive with cellular. Further, given the high cost of deploying a PCS system, subdividing the potential customer base among three licensees rather than two will make it difficult for all three licensees to generate enough subscriber revenues to survive.^{13/}

Even if the FCC decides to authorize more than two PCS licensees in a market, it should authorize no more than three licensees with at most 30 MHz each per market.^{14/} Given the

^{13/} In the United Kingdom, for example, economic considerations have already reduced the number of PCN licensees from three to two. See Telocator, October 1992, "Update on British PCS."

^{14/} The FCC requests comment on whether cellular operators should be licensed for PCS in their own service areas. NPRM at ¶¶ 63-68. As discussed at page 18, infra, Viacom strongly opposes this proposal. Moreover, the anti-competitive effect of "in-market" cellular participation in PCS would not be offset by increasing the number of PCS licensees in a market to more than three. Any additional competition provided by a fourth or fifth PCS licensee in a market would be insufficient to offset the huge competitive advantage already enjoyed by the cellular operator. Furthermore, the addition of a fourth or fifth entrant may reduce overall competition, since the small portion of the market left unserved by the cellular operator may not support two, much less three or four other PCS licensees. Viacom maintains that the
(continued...)

incipient nature of PCS, it is questionable whether even the largest markets could support four or five PCS licensees, two cellular licensees and, in the top six markets, an ESMR licensee.^{15/} In this regard, it should be noted that a higher number of PCS licensees will necessarily decrease the amount of spectrum available for each licensee. Permitting more than three PCS licensees per market will make it more difficult for PCS providers to compete on an equal footing with cellular, particularly if each PCS licensee is allocated less than 25 Mhz of spectrum. Furthermore, a smaller amount of spectrum per licensee will invariably impose higher relocation costs and delays in the provision of PCS service, since tighter spectrum allocations provide less flexibility in resolving conflicts arising from spectrum sharing. Simply put, it is imperative that the FCC not handicap PCS licensees by providing them too little spectrum flexibility for resolving sharing problems efficiently.

Relocation of Incumbents

The FCC has requested comments on what type of negotiated relocation program should be implemented for PCS. NPRM at ¶ 47.

^{14/}(...continued)

most effective way of ensuring sustained competition in PCS is to limit the number of PCS licensees to two, or at most three, per market and to exclude the cellular operator in the market from participation.

^{15/} ESMR is the digital cellular system being built by Fleetcall in the top six markets, including San Francisco. Fleetcall intends to be the "third cellular carrier" in these markets. See, Fleet Call, Inc., 6 FCC Rcd 1533, recon. dismissed, 6 FCC Recd 6989 (1991).

Specifically, the FCC has asked for comments on the involuntary relocation program put forth by the Utilities Communications Council ("UTC") in ET Docket No. 92-9. Id. UTC proposes a ten year voluntary negotiation period followed by involuntary negotiations, under which new users would be responsible for all relocation costs. Id. The FCC has tentatively concluded that the period of transition from voluntary to involuntary negotiations should be between three and ten years. First Report and Order and Third Notice of Proposed Rule Making, ET Docket No. 92-9, FCC 92-437 at ¶ 27 (released October 16, 1992).

In the original Spectral Zone Coordination proposal, where two 25 MHz preferred fixed bands are allocated to PCS and a 90 MHz pool is available to resolve conflicts, very little relocation would be required, and virtually none would be involuntary. If the FCC applies the Spectral Zone Coordination technique to the FCC's proposed fixed block scheme as suggested above, Viacom submits that the FCC need not require involuntary relocation in the near term except where there are no frequencies available in the pool to eliminate blockages. PCS licensees would then be able to operate in the spectrum pool while they negotiate with incumbent users or until such mandatory relocation and arbitration requirements as may be adopted by the FCC become applicable. If, however, the FCC adopts its fixed block assignments as proposed in the NPRM, Viacom submits that the FCC

establish a voluntary negotiation period of no more than three years, after which involuntary relocation would be required.^{16/}

Unlicensed Operations

The FCC proposes to reserve the 1910-1930 MHz band for unlicensed PCS operations. NPRM at ¶ 43. Under the FCC's proposal, unlicensed PCS would be co-primary with Part 94 fixed microwave operators. Id.

Viacom believes there are some difficulties with unlicensed PCS which the FCC needs to consider before reserving frequencies as proposed. For example, where an incumbent fixed microwave user is experiencing interference, it will be very difficult for the incumbent user to determine whether the source of that interference is an unlicensed PCS operator. Exhibit 1 at 8. In this regard, it should be noted that the FCC proposes to limit the power of unlicensed PCS operators but does not propose to limit the number of unlicensed PCS operators in a market. Id. Furthermore, where an incumbent user's frequencies overlap both the licensed and unlicensed PCS band, a licensed PCS operator may be subject to disputes with incumbents when in fact the cause of the interference is the unknowable usage patterns of unlicensed PCS operators. Id.

^{16/} The flexibility offered by the application of Spectral Zone Coordination permits maneuverability around public safety licensees who might not be subject to involuntary relocation and under the FCC's proposal could totally block implementation of PCS in some locations.

Service Areas

Viacom strongly opposes any nationwide licensing of PCS. As already recognized by the FCC, nationwide licensing would allow the smallest number of firms to participate in PCS. NPRM at ¶ 60. Moreover, nationwide PCS providers would enjoy a considerable advantage in resources and economies of scale over smaller regional providers. It is simply not in the public interest for a small number of nationwide providers to enjoy market dominance in a new communications service. A drastic reduction in the number of potential PCS providers when the market is still being defined will reduce competition to the point where the technical and service innovations desired by the FCC may cease to exist. Furthermore, nationwide licensees could unilaterally set de facto technical standards, which would be entirely undesirable given the incipient nature of the service.

Viacom recommends that the FCC instead adopt the cellular service areas (i.e., the 734 MSAs and RSAs) as the service areas for PCS. Unlike the Rand McNally trading areas and the telephone LATAs, the cellular service areas are specifically designed for a wireless communications service and are well known to the communications industry. Furthermore, each cellular service area is small enough to have its own distinct physical, demographic and economic characteristics, but should be sufficiently large for operation of a profitable PCS service. The use of the cellular service areas will also allow market entry by a wide variety of entities, thereby maximizing the potential for

competitive pricing and technological innovation. By contrast, the use of much larger service areas, such as the Rand McNally trading areas and or telephone LATAs, would greatly limit the number of market entrants and would likely result in a less competitive environment dominated by a small number of large, regional providers.

Eligibility Requirements

Viacom strongly opposes PCS licensing of any cellular operator within the cellular operator's service area. As already noted by the FCC, in a recent report on competition in the cellular telephone market, the General Accounting Office concluded that the current market structure "may provide only limited competition," and that "[a] policy that favors the allocation of spectrum to new firms, rather than to existing cellular telephone carriers in each market, would seem to serve the public interest by providing additional competition and potentially lower prices for consumers." NPRM at ¶ 65. The GAO report confirms that "in-market" participation by cellular operators in PCS will undercut the FCC's objective of providing a diverse, competitive PCS service.

For similar reasons, Viacom opposes any licensing of local exchange carriers ("LECs") for PCS within their service areas. Viacom therefore also opposes the Commission's proposal to provide 10 MHz in the 1850-1990 MHz band that LECs could use for local loop operations in their telephone service areas. NPRM at

¶ 77.^{17/} At most, the FCC should only award PCS licenses to LECs under a case-by-case waiver approach, whereby the LEC would have the burden of demonstrating that its presence in the market is too insubstantial to warrant concerns about anti-competitive conduct, e.g., where the LEC serves a small portion of a market.

Finally, Viacom supports a cap on the total population which may be served by any single PCS licensee. Again, as in the case of service areas, it will be necessary for the FCC to strike a balance between fostering economies of scale and encouraging a maximum diversity of competitors in the market. Accordingly, Viacom recommends that the FCC prohibit any single entity from holding PCS licenses or attributable interests in PCS licenses in more than 10% of the available markets serving more than 15% of the population, with no more than two licenses held in the top ten markets.

Licensing Mechanisms

Viacom supports the use of lotteries rather than comparative hearings or competitive bidding for awarding PCS licenses. Lotteries are the most effective mechanism for bringing PCS to the market quickly, since they should be administratively more efficient and less subject to procedural delays.

^{17/} The FCC suggests that allowing LECs to provide PCS within their current service areas may encourage them to develop their wireline architectures in a PCS-friendly way. NPRM at ¶ 74. Since the LECs are expected to compete with cable systems and others as providers of facilities for PCS cell interconnection, the LECs already have sufficient incentive to adapt their wireline architectures for PCS use.

Under the firm financial commitment standard, applicants are required to submit with their applications documentation from a lender stating that it is committed to lending a sum certain to the applicant. 47 C.F.R. § 22.917(c)(5). Such commitment letters normally require the borrower to pay a substantial commitment fee, and in any event may be very difficult to obtain under current economic conditions.

Regulatory Status

Viacom concurs with the FCC's tentative conclusion that PCS should be subject to minimal regulation regardless of whether the service is classified as private or common carrier. NPRM at ¶ 94. Viacom submits, however, that it is too early to assess the full ramifications of private versus common carrier status for PCS. For example, it is unclear at this time whether the courts will require PCS licensees, as non-dominant common carriers, to file tariffs. Nor is it clear what impact state and local regulation would have on PCS as a common carrier. Also, because private carriers may not sell interconnected telephone service for profit (NPRM at ¶ 95), any consideration of private carrier status for PCS must include an evaluation of the nature of the PCS customer base and whether it will be sufficient to support PCS as a seller of interconnected service on a non-profit, cost-sharing basis. Viacom submits that all of these issues will have different ramifications for each individual applicant, and that the best way to accommodate these differences is to allow applicants to select private or common carrier status

Viacom also supports the imposition of a filing fee high enough to discourage speculators. To ensure rapid deployment of PCS service, it will be imperative for the FCC to deter "mill" filings which reduce the opportunity for bona fide operators to secure licenses. Citing the methodology used for calculating filing fees for applicants in the 220 MHz band, the FCC suggests a filing fee of \$35 per channel pair, assuming a uniform number of cell sites per applicant. NPRM at ¶¶ 89-90. Viacom submits that while such a system may be workable for nationwide applicants, for whom a minimum number of cell sites may be assumed, it is not entirely clear how such a system would be applied to non-nationwide applicants whose cell site requirements will vary from market to market. To simplify the process, one alternative might be to treat each PCS application for a specific service area as a single application for processing purposes and assign a flat filing fee thereto. Viacom suggests that a flat fee of \$10,000 per service area would be sufficiently high to deter speculators and sufficiently low not to deter most serious, qualified applicants.

Viacom further recommends that the FCC require all PCS applicants to demonstrate in their applications that they have a reasonable expectation of the availability of funds. Viacom believes that this approach strikes the appropriate balance between no certification at all (which would most certainly encourage speculation) and the requirement of a firm financial commitment which the FCC imposes upon RSA cellular applicants.